DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-029321
Date Inspected: 18-Mar-2013

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name: Andrew Keech and William Sherwood

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS Tower & OBG

Summary of Items Observed:

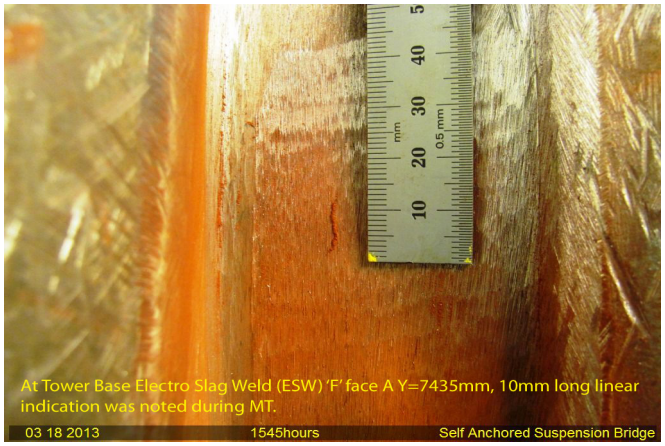
Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

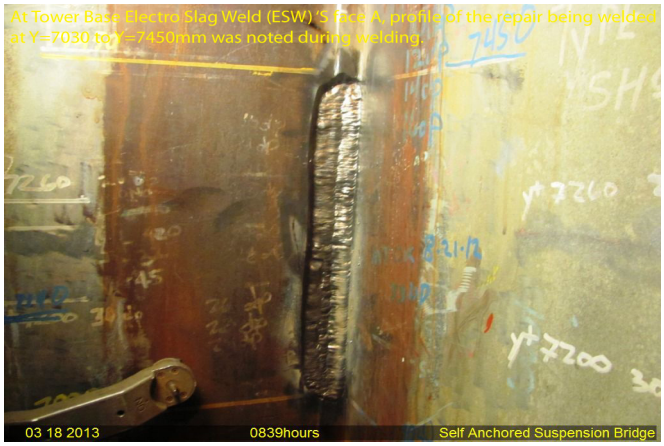
At OBG 13W-PP124-PP127-W2 top deck plate diverter bar, QA observed ABF welders Lin E. Yun and Guo Wu Chen perform fillet welding on 2 1/4"" wide x 3/8" thick diverter bar to the deck plate. The welders were welding in 2F (horizontal position) using 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-F1200A. The diverter bar was originally fillet welded both on sides of the bar to the top deck plate but was removed using carbon air arc and ground smooth due to interference with the safety bridge railing. During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welders. The fillet welding of the diverter bar was not completed on this date and will continue on the next scheduled shift.

At OBG 12E-PP116.5-E2 deck access hole outside, QA randomly observed the ABF/JV welder Mike Jimenez perform the Complete Joint Penetration (CJP) butt joint. The welder was observed manually welding in the 1G (flat) position utilizing a Shielded Metal Arc Welding (SMAW) with 5/32" diameter E7018H4R electrode and using the Welding Procedure Specification (WPS) ABF-WPS-D15-1040C. The joint being welded is a single-V-groove butt joint welded with steel backing bar. The ABF Quality Control (QC) Inspector, William Sherwood, was observed monitoring the welding parameters. This QA randomly verified the welding parameters and was noted as 170 amperes which appeared to conform with the contract requirements. The welding was not completed during this shift and will continue on the next scheduled shift.

At Tower Base Elevation Electro Slag Welding (ESW) of the T-joint #W-041 location ‘S’ (face A), QA randomly ABF welder Eric Sparks perform SMAW repair welding due exploratory excavation that was noted with linear indications. The excavation dimensions were noted as 420mm long x 55mm width x 39mm deep. The welder was observed welding in the 3G (vertical) position utilizing the Shielded Metal Arc Welding (SMAW) with a 5/32” diameter E7018H4R electrode using the welding procedure ABF-WPS-D15-1000-Repair Rev. 2. The excavation and the adjacent base metal were preheated to the minimum preheat temperature of 175°F using the propylene gas torch from face A and Miller Proheat 35 Induction Heating System with the heater blanket placed on the other side of the plate. During the shift, ABF QC Andrew Keech was observed monitoring the welding and checking the welding parameters which were noted as 170 amperes. During the shift, the weld repair at ESW location ‘S’ face A Y=7030mm to Y=7450mm was completed and the welder has moved to T-joint #-045 location ‘F’ face A and performed grinding on the excavation prior Magnetic Particle Testing (MT). After the welding completion of the repair, ABF personnel performed the Post Weld Heat Treatment (PWHT) to 350 degrees Fahrenheit and then cooled down to 75 degree per hour.

During MT, there was 10mm long linear indication that was noted at Y=7435mm at 14mm depth of excavation. The welder continued grinding until the end of the shift.





Summary of Conversations:

WELDING INSPECTION REPORT

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No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Gary Thomas 916-764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Reyes,Danny	QA Reviewer